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**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

**BASIC
IMAGERY
INTERPRETATION
REPORT**

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**TBILISI AIRFRAME PLANT 31 AND
TBILISI/SOGANLUG AIRFIELD (S)**

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**STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR
APRIL 1979**

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INSTALLATION OR ACTIVITY NAME Tbilisi Airframe Plant 31 Tbilisi/Soganlug Airfield				COUNTRY UR	
UTM COORDINATES NA	GEOGRAPHIC COORDINATES 41-39-45N 044-52-59E 41-38-57N 044-56-10E	CATEGORY	BE NO.	COMIREX NO.	NIETR NO.
MAP REFERENCE SAC. USATC, Series 200, Sheet 0325-12, scale 1:200,000					
LATEST IMAGERY USED			NEGATION DATE (if required) NA		

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ABSTRACT

1. (S/WNINTEL) This report updates NPIC report [] dated December 1968, and supersedes NPIC reports [] dated July 1974; [] dated June 1971; [] dated August 1970; and [] dated January 1970. This report covers the period from [] the information cutoff date of the updated report, to [] and substantially satisfies the basic reporting requirement for Plant 31.

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2. (TSR) A significant amount of construction occurred at both the plant and the airfield during this reporting period. The plant now covers an area of 53.9 hectares. This report includes a year-by-year update of construction activity at both facilities, a discussion of FISHBED and MONGOL aircraft and container production activity at Plant 31; a location map; five annotated photographs; and four tables, two containing mensural and descriptive data and two listing significant observations.

INTRODUCTION

3. (S/WNINTEL) This reports updates a previous NPIC report¹ and supersedes four other NPIC reports^{2,3,4,5} on the Tbilisi Airframe Plant 31 (Figure 1) which is situated in the southeastern suburbs of Tbilisi, USSR, on the north bank of the Kura River. The plant is approximately 2 nautical miles northwest of the Tbilisi/Soganlug Airfield and is connected to this airfield by an asphalt taxiway.

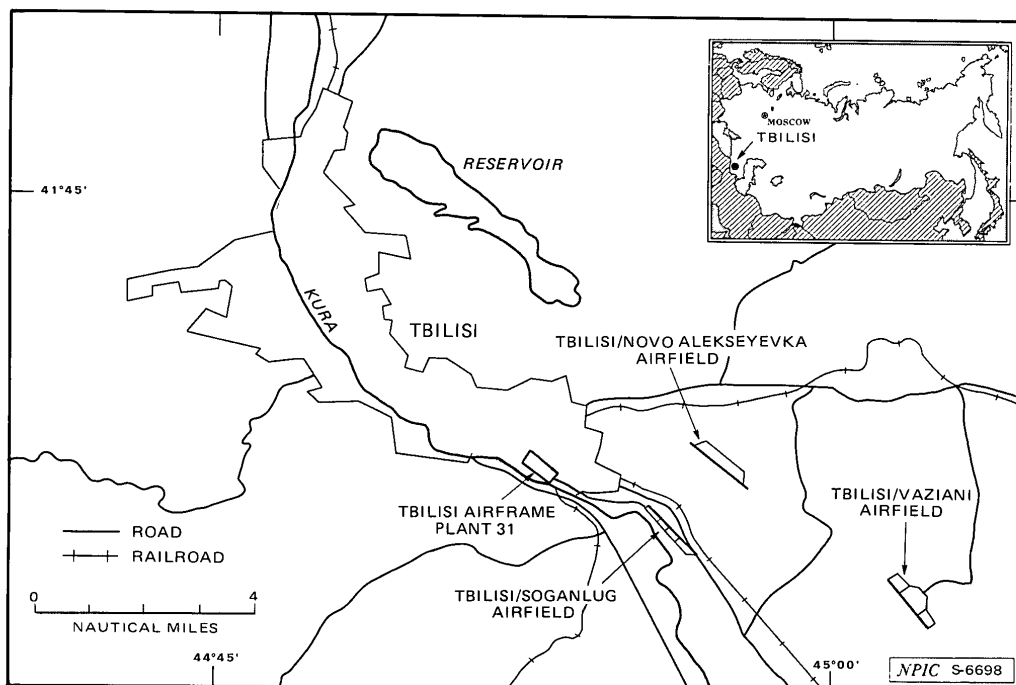


FIGURE 1. LOCATIONS OF TBILISI AIRFRAME PLANT 31 AND TBILISI/SOGANLUG AIRFIELD, USSR

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BASIC DESCRIPTION**Construction Activity at Plant 31**

4. (TSR) Extensive construction activity has been observed at the plant during the past ten years¹ (Figure 2 and Table 1); two buildings, which were observed under construction in 1968, have been completed, six have been modified, five have been razed, and 29 new buildings have been constructed. This resulted in an estimated net increase of 15,374 square meters of usable floorspace. The original report¹ contained some mensural inaccuracies; later imagery and improved mensural techniques show that the actual amount of floorspace at the plant in November 1968 was approximately 194,115 square meters, rather than the reported 197,462 square meters. The newly calculated floorspace figure and the completion of 15,374 square meters of floorspace and the 802 square meters under construction result in an estimated present total floorspace of 210,291 square meters. Complete mensural data on all significant buildings at the plant are included in this report. A new numbering system was also employed for clarity.

5. (TSR) As of [] Plant 31 occupied 53.9 hectares and consisted of 89 buildings and structures, 78 of which are considered to be significant. A functional breakdown of the floorspace of these 89 buildings and structures is presented in the following table.

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Function/Description	Floorspace (square meters)
Administration/engineering bldgs	32,874
Production bldgs	100,947
Production support bldgs	33,899
General support/storage bldgs	41,769
Under construction	802
Total floorspace	210,291

The following ten paragraphs describe the chronological sequence of construction activity at Tbilisi Plant 31.

1969

6. (TSR) Two small wings of a shop building (item 2, Figure 2 and Table 1) were razed between November 1968 and June 1969, reducing the floorspace of the shop by 409 square meters. An engineering building (item 10), first observed under construction in November 1967,¹ had been completed by June 1969. The recreation hall (item 11), previously identified as an administration building,¹ was enlarged between November 1968 and June 1969; the north wing was expanded, increasing the total floorspace of the building by 746 square meters. A pumphouse (item 53) and an associated water tank were completed when observed in June 1969; this facility probably functions in support of the rail system for the plant. Construction continued on the lumber mill (item 64) which was first observed under construction in March 1968.¹

1970

7. (TSR) The security wall southeast of the plant (Figure 2) had been moved by April, increasing the plant area by 3.6 hectares for a total of 53.9 hectares; the wall had been moved to accommodate the construction of a new POL storage facility and pumphouse (item 58). Construction on the lumber mill (item 64) was in the late stages by December.

1971

8. (TSR) In January, enlargement of a shop building (item 23) was first observed and the lumber mill (item 64), under construction since March 1968,¹ was observed completed. A check-out/warehouse section (item 24a) was being added to one end of the foundry building (item 24) and a shop section (item 24f) was being added to the other end. The POL storage area and new pumphouse (item 58), in the southeast corner of the plant, had been completed by June. A second pumphouse (item 55) and an associated small POL storage facility were constructed between June and November. This facility functions in support of the plant rail system.

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*Table 1. Chronology of Construction Activity at Tbilisi Airframe Plant 31
(Keyed to Figure 2)*

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Item	Description	Dimensions * (m)			Total Floorspace (sq m)	Date Considered Complete	Remarks
		L	W	H			
1	Shop bldg				670	..	
2	Shop bldg				744	Jun 69	2 wings of original bldg razed between Nov 68 & Jun 69, decreasing floorspace by 409 sq m; extensive piping on roof at west end of bldg
3	Admin bldg				3,053	..	2 stories
4	Admin bldg				4,016	..	2 stories
5	Final assem/ assem bldg					..	
a	Engr sec				6,000	..	3 stories; center portion 15.4m high
b	Assem sec				20,132	..	2 short stacks near NW corner
c	Final assem hall				1,720	..	
d	Subassem/shop sec				2,534	..	
e	Shop sec				292	..	
6	Stor bldg				345	May 73	First seen upon Dec 72; quonset
7	Spt bldg				184	..	
8	Weapons test/ calibration bldg				433	..	With associated firing-in butt, target track, & electronics
9	Engine test bldg				352	..	Contains 2 L-type test cells; each cell has 6 vents on roof & associated blast deflector
10	Engr bldg				276	Jun 69	2 stories; identified as admin bldg when upon
11	Recreation hall				3,490	Jun 69	2 stories; previously identified as admin bldg; original bldg completed Sep 57; was 2,744 sq m; north wing expanded between Nov 68 & Jun 69
12	Messhall				589	..	Large recreation area to south
13	Spt bldg				73	Oct 73	
14	Stor bldg				411	..	
15	Stor bldg				774	..	
16	Compressor bldg				1,780	Feb 77	Original bldg completed Aug 42; was razed & rebuilt between Sep 74 & Feb 77; small 2-story sec in SE corner
17	Shop bldg				232	..	
18	Water filtration bldg				550	..	Connected by buried pipeline to item 19; pumps water from Kura River; height at corners
19	Pumphouse				99	..	Draws water from item 18
20	Spt bldg				116	Aug 72	
21	Spt bldg				118	..	
22	Final assem/ assem bldg					..	Floorspace includes 3 small shop secs
a	Final assem hall				6,950	..	
b	Assem sec				41,460	..	Floorspace total includes 4 small shop secs
c	Engr/firehouse sec				737	..	3-story engr sec with small 1-story firehouse in NW corner
d	Shop sec				2,299	..	
e	Engr sec				757	..	3 stories
23	Shop bldg				1,416	Aug 72	Original bldg completed Aug 42; expanded between Jan 71 & Aug 72; circular cooling pond on south side of item 16
24	Foundry					Aug 72	
a	Checkout/warehouse sec				406	Aug 72	Footings first seen Jan 71; travelling crane immediately east
b	Foundry sec				3,101	..	
c	Foundry sec				1,386	..	
d	Fab sec				2,025	..	
e	Foundry sec				1,306	..	
f	Shop sec				202	Aug 72	Footings first seen Jan 71; oval cooling pond immediately west
25	Engr/shop bldg					May 77	Original bldg completed by Jun 63
a	Engr/shop sec				2,391	..	secs d & e connected by May 77
b	Shop sec				548	..	2 stories
c	Shop sec				701	..	Floorspace includes small protrusion on SW side
d	Engr sec				1,427	May 77	2 stories
e	Engr sec				513	May 77	2 stories
f	Transshipment sec				497	..	Originally separate bldg; rail spur enters on east side

* Horizontal measurements are accurate to within [] of measured distance) and vertical measurements are accurate to within [] of measured distance), both at a 95% confidence level.
 ** Reported as being complete in the report being updated, []

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Table 1. (Continued)

Item	Description	Dimensions * (m)			Total Floorspace (sq m)	Date Considered Complete	Remarks
		L	W	H			
26	Spt bldg				277	Oct 73	First seen ucon Jul 73
27	Transshipment bldg				2,639	**	Travelling crane & loading dock on north side; rail served
28	Transshipment bldg				7,260	**	Covered loading dock on north side; rail served
29	Security bldg				274	Jul 73	Drive through; first seen ucon Jan 73
30	Transshipment bldg				4,620	**	Travelling crane & loading dock on south side; rail served
31	Carpentry shop					**	
a	Processing/assem				1,325	**	36 roof vents
b	Sawmill sec				3,677	**	3 sawdust collectors on south side
c	Admin sec				613	**	2 stories
32	Poss filtration/pro- cessing bldg ucon				356	—	First seen ucon Jun 78; associated with items 33 & 34
33	Filtration/processing bldg ucon				446	—	First seen ucon Sep 74; associated with items 32 & 34
34	Filtration/processing bldg				446	Mar 77	First seen ucon Jul 74; may be sewage or water treatment; has 5 associated buried inverted-cone-shaped pits
35	Admin bldg				2,223	**	3 stories
36	Engr bldg				2,274	Sep 77	2 stories; first seen ucon Apr 76; rectangular cooling pond near east side
37	Pumphouse				185	**	Provides water for items 36 & 38
38	Final assem bldg					**	
a	Final assem hall				13,603	**	
b	Final assem hall				14,548	**	
c	Shop sec				589	**	
d	Engr sec				2,377	**	2 stories
e	Shop sec				924	**	
f	Shop sec				1,292	**	
g	Engr sec				1,096	**	2 stories
h	Admin sec				1,065	**	2 stories; north half is single story
39	Admin/engr bldg					**	
a	Admin sec				432	**	4 stories
b	Engr sec				2,839	**	3 stories; previously identified as having 4 stories ¹
40	Crating bldg				4,472	Jul 74	First seen ucon May 65; open sided; previously identified as assem/shop bldg ¹
41	Shop bldg				551	**	Previously identified as assem/shop bldg ¹
42	Shop bldg				609	Jan 78	First seen ucon May 77; constructed over cooling pond; ¹ new cooling pond near south side
43	Stor bldg				444	Oct 73	Quonset; replaced utility bldg ²
44	Spt bldg				250	Oct 73	First seen ucon Jun 73
45	Warehouse				564	**	
46	Warehouse				639	**	Floorspace includes 2 small attached wings
47	Stor bldg				201	Oct 73	Quonset; first seen ucon Jun 73
48	Warehouse				1,114	**	Open sided & rail served on north side
49	Warehouse				1,337	**	Rail served on north side; large open loading dock on east side
50	Warehouse				1,878	**	Rail served on north side
51	Shop bldg				1,188	Jan 75	Expanded between Jul 74 & Jan 75; original bldg was 279 sq m
52	Steamplant				1,977	**	3-story admin sec on west side; 2 large stacks north of bldg
53	Pumphouse				33	Jun 69	Adjacent to water storage tank; prob supports rail line
54	Warehouse				884	**	Roof has scalloped edges
55	Pumphouse				62	Nov 71	First seen ucon Jun 71; 5 associated POL tanks immediately east; prob supports rail line
56	Stor bldg				43	Aug 72	First seen ucon Jun 72; associated with item 55
57	Vehicle repair shop				3,371	**	Floorspace includes 2 small, 2-story secs
58	Pumphouse				183	Jun 71	First seen ucon Apr 70; serves separately secured POL depot; plant security wall moved to accommodate this area
59	Vehicle storage bldg				641	**	Previously identified as warehouse; ¹ height at eave
60	Vehicle repair bldg				216	**	3 adjacent grease racks

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* Horizontal measurements are accurate to within [] of measured distance) and vertical measurements are accurate to within [] of measured distance), both at a 95% confidence level.

** Reported as being complete in the report being updated.

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1978

15. (TSR) A shop building (item 42), first observed under construction in May 1977, had been completed by January 1978, and the new warehouse (item 65), first observed under construction in October 1976, had been completed by June 1978. As of [] construction continued on the new filtration/processing building (item 33). A new associated building (item 32), possibly another filtration/processing building, was in the early stages of construction. Five inverted-cone-shaped pits had been dug adjacent to the two new buildings.

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Construction Activity at the Airfield

16. (TSR) Construction activity at the airfield (Table 2 and Figure 3) during the past ten years has almost tripled the amount of usable floorspace; 19 new buildings were constructed, one was razed, and two were enlarged. This activity resulted in an increase of 8,188 square meters of usable floorspace. As of [] the airfield was supported by 39 buildings and structures with a total floorspace of 12,503 square meters. Of these 39 buildings and structures, 28 are considered to be significant. The following ten paragraphs describe the chronological sequence of construction activity at the airfield.

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17. (TSR) Mensuration of the runway at Tbilisi/Soganlug Airfield revealed that it is 2,493 by 80 meters rather than 2,470 by 79 meters, as was reported previously.¹ Since no runway construction or repair activity was observed during the reporting period, it is, therefore, possible that the difference is a result of improved mensural capabilities.

18. (S/WNINTEL) No activity was observed.

1970

19. (S/WNINTEL) Footings for the operations building (item 13, Table 2 and Figure 3) were first observed in September.

1971

20. (S/WNINTEL) Footings for the communications building (item 15) were first observed in September. Construction on the operations building (item 13) continued at a moderate pace.

1972

21. (TSR) The operations building (item 13), first observed under construction in September 1970, and the communications building (item 15), first observed under construction in September 1971, had both been completed by August. The administration building (item 9) was enlarged between January and August, increasing the total floorspace by 483 square meters. An administration building/dining hall (item 11) was constructed between March and August on the site previously occupied by an operations building.¹ A probable quarters (item 8) was constructed between January and August and a security building (item 20) was constructed between August and December. A storage building (item 17) and three support buildings (items 2, 27, and 28) had been completed by August. A fourth support building (item 4) was constructed between August and December.

1973

22. (S/WNINTEL) A storage building (item 10) was constructed between June and October and a support building (item 16) was constructed between June and November.

1974

23. (S/WNINTEL) Initial construction of the administration section (item 7b) of the administration/flightline maintenance building (item 7) was observed in August. Footings for a new support building (item 5) were first seen in June.

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*Table 3. Shipping Containers Observed at Tbilisi Airframe Plant 31,
Jun 69 to Oct 78**

This table in its entirety is classified TOP SECRET RUFF

Date	Mission	FISHBED Fuselage Type A	FISHBED Fuselage Type B	FISHBED Fuselage Type C	FISHBED Fuselage Type D	FISHBED Component	LA-17M Type B	AS-2 KIPPER	Unidentified (small)
			1			8			
			2			1			
			4						
			2			6	3		10
			2	4	1**	4	5	5***	20a
			5	8		10	10		20a
			5				8		20a
			7				7		50a
									100a
					4†			1	100a
						1			500a
						1		1	300a
									300a
						3	4		300a
			2			2			200a
						1		2	200a
		4				12	4		150a
						11	4	1	150a
						2			15a
		2				1	9		20a
		6				1	4		
		5				2	6	3	
		5				1	2	3	
		3				2	10		
		6				2	3	3	
		6				3	7	12	
		5				5	3	20	

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*Selected coverages; observations are confirmed unless otherwise noted.

**Only identification at plant.

***Modified.

a = Approximate count.

† Includes 2 prob.

1975

24. (TSR) Footings for the new steamplant (item 1) and a new support building (item 3) were first observed in January. The administration section (item 7b) of the administration/flight-line maintenance building (item 7), first observed under construction in August 1974, was complete when observed in August 1975, increasing the total floorspace of the building by 1,148 square meters. A checkout building (item 22), with an associated hardstand, was constructed between June and August. Construction continued at a slow pace on a support building (item 5).

1976

25. (S/WNINTEL) A support building (item 5), first observed under construction in June 1974, had been completed by January 1976. Construction continued on the new steamplant (item 1).

1977

26. (TSR) The new steamplant (item 1), first observed under construction in January 1975, was externally complete in February 1977; however, the stack associated with this building was still under construction at the end of the year. The ground control approach (GCA) site control building (item 26) was constructed between January and February. A support building (item 3), first observed under construction in January 1975, had been completed by May 1977.

1978

27. (TSR) In June, the stack associated with the steamplant (item 1) and two storage buildings (items 23 and 25) were completed when observed. Footings for an unidentified building (item 24) were first observed in June. This building was still in the early stages of construction on [redacted] Since the function and amount of floorspace at this building could not be determined, it was not included in the total floorspace figure.

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Production Status of Plant 31

28. (TSR) Prior to [REDACTED] Plant 31 was involved in the production of the AS-2 KIPPER; the UMiG-21 (MONGOL), a trainer version of the MiG-21 (FISHBED) aircraft; and the LA-17M, a ground-launched target drone. Production changes occurring during the past ten years are discussed in the following paragraphs.

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29. (TSR) According to shipping container observations at Plant 31 (Table 3), KIPPER missile production had probably decreased considerably by mid-1971 and continued at a low rate until 1977. On [REDACTED] five new KIPPER shipping containers were identified at the plant (Figure 4). This was the highest count of KIPPER shipping containers since August 1969. The new

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Table 4. Aircraft Observations at Tbilisi/Soganlug Airfield, Aug 72 to Sep 78*

This table in its entirety is classified TOP SECRET RUFF

Date	Mission	UMiG-21 MONGOL	MiG-21 FISHBED**	MONGOL/ FISHBED***	FISHBED/MONGOL Total For Coverage
		7		18	7
		1	1	13	18
			3	7	15
				5	10
		7	2	1	5
				7	10
		1	1	5	7
				10	7
				5	10
				7	5
				9	7
				7	9
		1	1	19	7
				9	21
		10			9
		1		6	10
				8	7
				10	8
				4	10
		5			4
				3	5
					3
					0
				4	4

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*Selected coverages.

**Late models (J/K/L/N).

***Limited film quality precluded distinguishing between the MONGOL and FISHBED aircraft.

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KIPPER container is very similar to the type C FISHBED aircraft fuselage container, but the KIPPER container has a [] extension projecting from its end. This new KIPPER container was subsequently seen at Alekseyevka Airfield [] a Soviet naval aviation base subordinate to the Pacific Fleet Air Force.

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30. (TSRZU) MONGOL aircraft production rates varied throughout the reporting period from a high of five per month in 1972 to a low of two to three per month in 1973. The production rate for 1977 was estimated as being approximately three per month.⁶ A change in MONGOL aircraft crating techniques was also observed. Throughout 1973 and during a part of 1974, the standard shipping container for the MONGOL was the type A FISHBED fuselage shipping container. Type A containers were last seen at the plant on [] (Table 3). Since [] the type B FISHBED fuselage shipping container, with its distinctive "boat-nosed" appearance, has been observed (Figure 5). It seems that the type B has replaced the type A as the standard shipping container for the MONGOL.

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31. (TSR) Photographic evidence suggests that a small number of late-model FISHBED aircraft are possibly being assembled at Plant 31. Since [] a total of eight late-model FISHBED have been observed at the Tbilisi/Soganlug Airfield (Table 4 and Figure 6). The type C container is usually associated with the FISHBED D/F but can be used for J/K/L/N models. The type D container is the standard container for FISHBED L/N. Since [] 12 type C FISHBED fuselage shipping containers (Figures 4 and 5) and one type D FISHBED fuselage container (Figure 4) have been identified at the plant (Table 3).

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32. (TSR) The necessary FISHBED components probably came from Gorkiy Airframe Plant 21 ([]), the major FISHBED production facility in the USSR. On [] 20 small shipping containers were observed at Plant 31 (Figure 4 and Table 3) and by May 1976 approximately 500 were present. These containers, which are [] were first identified at Gorkiy Plant 21 in early 1972. Significantly, as the number of these containers decreased at Plant 21, the number increased at Plant 31.

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33. (TSR) Production of the LA-17M target drone at Plant 31 remained constant through mid-to-late 1975. In 1976, however, no LA-17M shipping containers were observed at the plant (Table 3). Production of the LA-17M resumed in 1977 but had probably ceased again by early 1978. This pattern of on-off production may represent a produce-as-ordered production status for the LA-17M.

REFERENCES

IMAGERY

(TSR) All applicable KEYHOLE imagery of suitable interpretability acquired from [] (Mission 1105-1) through [] was used in the preparation of this report.

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MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0325-12, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

1. NPIC. [] RCA-09/0007/69, Tbilisi Airframe Plant 31, Dec 68 (TOP SECRET []) 25X1
2. NPIC. [] BCA-09/0005/75, Tbilisi Airframe Plant 31, Jul 74 (TOP SECRET []) 25X1
3. NPIC. [] BCA-09/0001/72, Tbilisi Airframe Plant 31, Jun 71 (TOP SECRET []) 25X1
4. NPIC. [] BCA-09/0008/71, Tbilisi Airframe Plant 31 and Tbilisi/Soganlug Airfield, Aug 70 (TOP SECRET []) 25X1
5. NPIC. [] BCA-09/0022/70, Tbilisi Airframe Plant 31, Jan 70 (TOP SECRET []) 25X1
6. DIA. [] DDB-1923-2-78 SAO, Foreign Aircraft Production Communist World (U), May 78 (TOP SECRET []) 25X1

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REQUIREMENT

COMIREX J02
Project 290055DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, []

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